

CorpsLON Vendor and Product Support



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Slide 1

LonMark Functional Profiles

- Access/Intrusion/Monitoring
- Fire & Smoke
- HVAC
- Industrial
- Input/Output
- Lighting
- Management
- Motor Control
- Refrigeration
- Sensor
- Elevator/Lifts
- Whitegoods
(Home Appliances)



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http://www.lonmark.org/technical_resources/guidelines/functional_profiles

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Slide 2

LonMark Functional Profiles - HVAC Category -

- Fan coil controller
- Roof top unit controller
- Chiller
- Heat pump with temperature control
- Thermostat
- Chilled ceiling controller
- Unit ventilator controller
- Space comfort controller
- Space comfort control command module
- VAV controller
- Damper actuator
- Pump controller
- Valve positioner
- Boiler controller
- Discharge air controller

Each of these FP's defines application specific communication requirements



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Slide 3

Partial List of Vendors Supplying LonMark Certified Devices

- ABB Industry
- Belimo Automation
- Circon Systems Corp.
- Continental Control Systems
- Danfoss
- Distech Controls Inc.
- Echelon
- FieldServer Technologies
- Functional Devices
- Honeywell
- Hubbell Building Automation
- Phoenix Controls
- Invensys Building Systems Inc.
- Johnson Controls Inc.
- Kele
- McQuay
- Siemens Building Technologies
- TAC
- Trane
- York International



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http://www.lonmark.org/certifications/device_certification/product_catalog/

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Slide 4

Who Can Meet the Specs?

- Unbundling of pieces means this can be a difficult question to answer
- It depends on the exact question:
 - DDC System (building control system):
 - Who makes controllers that meet the specs?
 - Who can install the DDC system per spec?
 - UMCS
 - Who makes UMCS software that meets the spec?
 - Who can install a UMCS?



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Slide 5

Disclaimer

- The intent and purpose of providing a list of products is to disclose the capabilities of technologies, as best we understand them, that may impact the Army's goal of implementing open non-proprietary building automation systems in accordance with UFGS 25 10 10 & UFGS 23 09 23 requirements.
- These listings are only intended to provide insight as listed products have not been vetted. Listed products cannot be used to exclude products that are not on the list.
- Listed products should not be used in specifications, by citing specific products, in the absence of full vetting and even then only in accordance with procurement rules.
- Listed products cannot be used as any form of certification by ERDC-CERL nor can listing of a product be interpreted or used as an expressed or implicit ERDC-CERL endorsement of a particular manufacturer, supplier, or product.
- Listed products cannot be used as the J&A for limiting competition in an Army acquisition.
- These listings are not to be used to the exclusion of UFGS 25 10 10 or UFGS 23 09 23 requirements.
- Listed products cannot be perceived as an all-inclusive and complete list of the organizations in the world that offer LonWorks® technology that meet the Army's above stated goal. It is our intent to expand the list as more LonWorks® products are developed and offered in the marketplace, at: <https://eko.usace.army.mil/fa/BAS/>

DDC System

- Controllers
 - Circon, Distech, Honeywell, Johnson Controls (JCI), TAC, Trane
 - ABB, Belimo, Danfoss, Hubbell, Veris
 - Others
- DDC System Installation
 - Circon, Distech, Honeywell, JCI, TAC, Trane
 - **Many** System Integrators



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Slide 7

ASCs with LNS Plug-ins

- Honeywell
 - Excel 10 Fan Coil Unit Controller
 - Excel 10 Hydronic Controller
 - Excel 10 Constant Volume Air Handling Unit (W7750)
 - VAVII / SmartVAV Controller
- TAC
 - Xenta 102 Fan Coil Controller
 - Xenta 102 VAV Controller
 - Xenta 110 Dual Zone Controller
 - Xenta 104 Roof Top Unit Controller
 - Others



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Slide 8

ASCs with LNS Plug-ins

- Johnson Controls Inc.
 - LN Series - Fan Coil Unit Controller
 - LN Series - Roof Top Controller
 - LN Series - Heat Pump Controller
 - LN Series - VAV Box Controller
 - LN Series – Programmable Controller (this is an AGC)
- Distech
 - ECVAV-L VAV Controller
 - EC-FCU-L Fan Coil Controller
 - EC-RTU-L Roof Top Unit Controller
 - EC-UV-L Unit Ventilator Controller
 - EC-HPU-L Heat Pump Unit Controller
 - Others



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Slide 9

ASCs with LNS Plug-ins

- Circon
 - UHC-302 VAV Controller
 - SCC-300-AHC Air Handler Controller
 - SCC-300-FCC Fan Coil Unit Controller
 - SCC-300-HPC Heat Pump Unit Controller
 - SCC-300-RTC Rooftop AC Unit Controller
 - SCC-300-UVC Unit Ventilator Controller
 - Others



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Slide 10

ASCs with LNS Plug-ins

- Trane
 - Tracer AH540 Air Handler Controller
 - Tracer LCI-R-DAC Rooftop AC Intercace
 - Tracer LCI-R-SCC Rooftop AC Intercace
 - Tracer MP501 Setpoint Controller
 - Tracer MP503 I/O Module
 - Tracer MP580 Programmable Controller (?)
 - Tracer VV550 VAV Controller
 - Tracer ZN510, ZN517, ZN520, ZN523, ZN524



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Slide 11

Miscellaneous ASCs with LNS Plug-ins

- ABB
 - N400 Variable Speed Drive
 - N60030 Variable Speed Drive
 - N60050 Variable Speed Drive
- Continental Control Systems
 - WattNode-FT10 (but not WattNode Plus)
- Veris
 - H8920-3 Energy Meter
- Bremer
 - VIVA CoffeeMachine



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Slide 12

UMCS

- M&C Software
 - Circon, Distech, Honeywell, JCI, TAC
 - Wonderware, Others
- Network Configuration Tool
 - Circon, Distech, Honeywell, JCI
 - Echelon, Newron Systems, Others
- System Installation
 - Circon, Distech, Honeywell, JCI, TAC
 - System integrators



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Slide 13

Acceptable* M&C Software (alphabetical by manufacturer)

- **Visual Integrator 3** (*Circon*)
- **Londisplay 3** (*Distech*)
- **EBI** (*Honeywell*)
- ***Proficy/iFIX*** (*GE Fanuc*) *{formerly from Intellution}*
- **LCS-8520 (Flat LON Extended Architecture)**
(*Johnson Controls*)
- **VISTA** (*TAC*)
- **InetSupervisor** (*Quark Technologies*)
- **Intouch** (*Wonderware*)



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(Underlined = more confidence/familiarity)

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Slide 14

Acceptable* NCT Software (alphabetical by manufacturer)

- **Network Integrator 3** (*Circon*)
- **Lonwatcher 3** (*Distech*)
- **LonMaker** (*Echelon*)
- **LN Builder** (*Johnson Controls*) *{rebranding of Distech Lonwatcher}*
- **NL220** (*Newron Systems*) *{looks like TAC will be moving to this}*
- **perfectHOST for LNS** (*Richards Zeta*)
- **VC Network Manager** (*Smart Controls*) *{formerly from Visual Control}*



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Slide 15

Straight Talk on Vendors -Disclaimer-

- What follows is our interpretation of the capabilities of various manufacturers products
- The intent and purpose of providing this information is to disclose the capabilities of technologies, as best we understand them, that may impact the Army's goal of implementing open non-proprietary building automation systems in accordance with UFGS 25 10 10 & UFGS 23 09 23 requirements.
- This information is only intended to provide insight as the described capabilities have not been vetted.
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Straight Talk on Vendors - Tridium -

- Tridium (Niagara Framework: JACE and AX)
 - Not LNS
 - Building must be designed to work with JACE – violates the intent of Open procurement of building systems
 - JACE hardware required for every X devices
 - Supervisory controller at building
 - Building level web server (as an unmanaged server)
 - Gateway (uses BACnet at IP level)
- Tridium (AX with LNS) ???
 - May be acceptable
 - So far our info on this approach is limited and conflicting
 - We are investigating



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Straight Talk on Vendors - Johnson Controls Inc. -

- Metasys Extended Architecture. Three approaches:
 - NAE (supervisory controller) at building – **Bad**
 - NAE co-located with UMCS OWS/Server – **Better**
 - NAE packaged in a server (LCS 8520) – **Preferred**
- LN-Series controls (Same as Distech brand)
 - ASCs appear to meet all specs (ASC, LNS, LNS plug-in)
 - Uses LN Builder (Network Configuration Tool)
- MCL Tool (Network Configuration Tool)
 - LNS-based. Runs LNS Plug-ins from other vendors.
- Comm Pro Tool
 - Permits configuration of JCI LonWorks controllers, but will only 'read' 3rd party controllers/devices



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Slide 18

Straight Talk on Vendors - Honeywell -

- EBI - Open UMCS implementation of LNS/LonWorks
- SymmetrE - Scaled down (less functional) version of EBI.
- **CARE** software is not an LNS Network Configuration Tool... It can export an LNS DB but doesn't actually use LNS and can't import an LNS DB
- Light Commercial Building System (LCBS)
 - *Not LNS*
 - Uses **LonSpec & LonStation** (Honeywell softwares) that work only with Honeywell system/devices
 - Uses a "Building Manager" supervisory controller/gateway
- ComfortPoint is Honeywell's Tridium (Niagara/JACE) and does not meet UFGS requirements



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Slide 19

Straight Talk on Vendors

- **TAC**
 - VISTA can be OK
 - Can meet letter of spec when used without Xenta 400 controllers
 - Can meet intent of spec with Xenta programmable controllers. (Issues with communication with Xenta programmable controllers mean extra effort on TACs part is required to meet intent of spec)
 - Xenta 400 may still be needed for demand limiting
 - UNC-520 is Tridium (Niagara) and not acceptable
- **WonderWare**
 - Closest to "pure" Open
 - Provided and supported by "third party" System Integrators



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Slide 20

Straight Talk on Vendors

- **Circon**
 - 300 series hardware meets the spec (200 does not)
 - Visual Control not a web-based front end
 - Fort Huachuca has a Circon UMCS
- **Distech**
 - LonDisplay not a web-based front end
- **Siemens**
 - Apogee does not meet UFGS – it's not LNS
 - Modular Building Controller (MBC) is a gateway
 - Partnering with Distech in attempt to meet UFGS



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Slide 21

Straight Talk on Vendors

- **Trane**
 - Tracer system is not LNS and does not meet UFGS
 - BCU is building gateway and does not meet UFGS
 - Recently released LNS plug-ins
 - Rover Network Configuration Tool does not use LNS
 - Can/have provided systems in accordance with DDC UFGS only
- **Alerton, Automated Logic, Delta**
 - “Native BACnet” vendors



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Slide 22

Summary

- Know the vendors, their products, and capabilities
- Know what industry is up to and how it affects you
- Don't believe everything you hear, FUD is everywhere



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Slide 23

